

### REMARKS

This paper is supplemental to the response filed on May 12, 2008, and incorporates the remarks made therein.

In response to Examiner Nasser's recent telephone message regarding Shertukde et al. (US 7,291,111), the applicants note that Shertukde et al. also fail to describe or suggest a method of detecting a change in vascular condition by calculating a difference between each of the spectral characteristics at each of the frequencies for a first group of cardiac cycles and the spectral characteristic at the corresponding frequency for a second group of cardiac cycles, as recited in claim 1. Instead, Shertukde et al. describe a system in which the presence of a vascular occlusion is detected by monitoring a narrow band of frequencies for the presence of a triggering pulse (i.e., a signal amplitude) that exceeds a predetermined threshold. [col. 3, lines 20-27] Shertukde et al. further describe summing wavelet coefficients to determine the severity of the occlusion. [col. 3, lines 36-41] However, Shertukde et al. never calculate a spectral difference between first and second vascular states at a particular frequency, much less for a plurality of particular frequencies across a frequency band. Rather, Shertukde et al. use a simplistic triggering pulse detection to identify the presence of a vascular occlusion and then use wavelet summations to determine a severity of the occlusion. Thus, as with the technique described by Chassaing et al., the technique described by Shertukde et al. would simply not be able to detect a redistribution of energy within the frequency bands from which it collects spectral data because Shertukde et al. only look at a peak amplitude within a particular frequency band to detect an occlusion and then sum wavelets to estimate the severity of the occlusion.

Thus, because Chassaing et al. and Shertukde et al. both fail to describe or suggest detecting a change in vascular condition by calculating a difference between each of the spectral characteristics at each of the frequencies for the first group of the cardiac cycles and the spectral characteristic at the corresponding frequency for the second group of cardiac cycles, as recited in claim 1, no combination of these references can render claim 1 obvious. Accordingly, for at least the foregoing reasons, claim 1 and all claims dependent thereon are believed to be in condition for allowance. The remaining pending claims are also believed to be in condition for allowance for at least the reasons set forth above in connection with claim 1.

For at least the foregoing reasons, the applicants respectfully submit that all pending claims are in condition for allowance. The examiner is urged to call the undersigned attorney at the number listed below if there are any remaining issues in this application.

The Commissioner is hereby authorized to charge any deficiency in the amount enclosed or any additional fees which may be required during the pendency of this application under 37 CFR 1.16 or 1.17 to Deposit Account No. 50-2455.

Respectfully submitted,

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